

INTEROFFICE CORRESPONDENCE

DATE: October 10, 1994

TO: Distribution *wt*

FROM: L.N. Takamura, Solar Pond Projects, Bldg. 080, X8613

SUBJECT: SOLAR POND PROJECTS CHANGE CONTROL PROCESS -
LNT-004-94

DOE Order: 4700.1

Action: Provide Comments to Les Takamura by Noon Thursday , October 13

The need for a formalized configuration management and change control system within the Solar Pond Projects (SPP) Office has increased in FY1995 due to the following factors:

- A. A draft revised Rocky Flats Management Control System (RFI 2250.1) which identifies the management control point of work for Rocky Flats Field Office (RFFO) at the Major Activity (MA) level. The Site Change Control Board (SCCB) will review and approve baseline changes at the Major Activity Document (MAD) level.
- B. An M&O Contractor Change Control Board (CCCB) will be established and have approval authority for changes which do not meet the SCCB thresholds. It is anticipated that the CCCB will review and approve funding changes between MADs. MA Managers will have much greater flexibility to approve changes within the MAD.
- C. The FY1995 MAD budget target was inadequate to fund all scope requirements. The OU4 Solar Ponds MAD budget target was \$29.6 million which allowed for zero contingency dollars and resulted in requirements being placed on the unfunded list.
- D. An integrated OU4 schedule and greater interdependency between the OU4 Summary Cost Accounts.

Please review the attached draft configuration management process for the Solar Pond Projects Office and provide written comments to Les Takamura by noon Thursday, October 13, 1994.

Attachment:
As Stated

Distribution:

T. d. Beckman
S. R. Keith
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cc:
L. N. Takamura
~~EG&G Records (2)~~
File

ADMIN RECORD
1101-A-000176

SOLAR POND PROJECTS OFFICE (SPPO) CHANGE CONTROL PROCESS

PURPOSE

To provide a configuration management system and change control process for maintaining and controlling the OU4 Solar Pond technical, schedule, and budget baselines for FY1995.

SCOPE

Applies to all Solar Pond Projects personnel, including matrixed personnel, responsible for implementing changes in the OU4 Major Activity Document (MAD) and Major Activity (MA) work packages; work packages not included in the OU4 MAD managed by SPPO personnel; and the detailed schedules and resources in the plant Project Control System (PCS), the Environmental Restoration (ER) master schedule, and the detailed OU4 integrated schedule maintained by the Central Planning and Budgets (CP&B) schedulers in SPPO.

DEFINITIONS

See Appendix 1 for a glossary of terms and definitions.

RESPONSIBILITIES

Major Activity Manager

- 1) Manages the Major Activity for Solar Ponds CAD in the Plant Work Breakdown Structure (WBS)
- 2) Implements these instructions within SPPO.
- 3) Dispositions all change requests within the MA Manager approval authority.
- 4) Endorses or disapproves all BCPs that must be submitted to an approval authority/board above the MA Manager for final authorization.
- 5) Controls all changes to MAD CAD while coordinating with the appropriate RFFO technical counterpart.

SPPO Managers/Direct Reports

- 1) Establishes an internal change control process for the documentation and disposition of change actions within their approval authority.
- 2) Provide copies of documentation of change actions approved at the MA Manager level or below affecting their respective work packages.

Work Package Managers

- 1) Establish and identify key internal milestones and logic ties in the integrated schedule to assess impacts of "what if" proposals to the schedule.
- 2) Identifies desired change action in writing to the CP&B scheduler to generate "what if" schedules.
- 3) Assesses, with the assistance of the CP&B scheduler "what if" schedule for impact to integrated schedule key internal milestones, critical path, or external milestone.
- 4) Distributes "what if" schedule to other Work Package Managers to assess impacts of proposed change actions if there is impact to integrated schedule float, critical path, or external milestone..
- 5) Assesses impacts of "what if" schedules from other Work Package Manager's change proposal to own Work Package schedule. Submits changes to the originator of the change to accommodate the impacts.
- 6) Prepares, with the assistance of the CP&B analyst, the BCP documentation for change actions above the MA Manager approval threshold.
- 7) Presents and defends change request to approval board(s), as required.

CP&B Scheduler

- 1) Maintains the OU4 integrated baseline schedule and all latest approved revisions.
- 2) Assists the Work Package Managers in developing "what if" schedules for proposed changes.
- 3) Assists the Work Package Managers in identifying impacts to key internal milestones impacted by "what if" proposals.
- 4) Maintains a log of all "what if" change requests with written documentation of requested changes.

CP&B Analyst

- 1) Obtains BCP number and assists the Work Package Managers in completing required BCP forms, including PCS-generated reports, for change actions requiring formal BCP documentation.
- 2) Advises Work Package Manager and MA Manager of status of BCP through the review and approval cycle.
- 3) Supports the Work Package Manager and MA Manager in presentation and defense of BCP to appropriate board(s).
- 4) Implements "upload" of approved BCP in the PCS system.
- 5) Coordinates update of the Work Package and MAD documentation, as required.

SPPO Configuration Management Person

- 1) Maintains documentation file of all approved change actions.
- 2) Maintains record file of latest approved MAD baseline.
- 3) Distribute a summary monthly of all change proposals approved affecting the OU4 MAD and integrated schedule.

APPROVAL AUTHORITY

Reviews, approvals, and disposition of change requests depend on the magnitude of the change request and the thresholds established for each review level. The levels of change control are the Emergency System Acquisition Advisor Board (ESAAB), the Program Change Control Board, the Site Change Control Board, the M&O Contractor Change Control Board, the ER Change Control Board, the MA Manager, and below MA Manager threshold which will be determined by the SPPO Managers/Direct Reports. See Appendix 2.

INSTRUCTIONS

Identification of baseline change

Any SPPO personnel can identify the need for a change to the baseline and convey that need to the appropriate project managers or work package managers. A change to the baseline can be related to scope, cost, or schedule using the following criteria:

Scope Change	A change in scope constitutes a withdrawal or addition of an activity or activities that alter the overall purpose, function, or goal of a work package.
Cost Change	A cost change is a change in resources required reflected in the work package BCWS in the PCS expressed in dollars.
Schedule Change	A schedule change is a change in activity duration or network logic that has an impact on milestones or the final completion of the work scope.

Impact Analysis

The Work Package Manager, with the assistance of the CP&B scheduler, prepares a "what if" schedule incorporating the desired change. A brief description of the desired change will be provided to the CP&B scheduler who will maintain a log of each "what if" schedule that is generated.

The Work Package Manager will analyze the "what if" schedule to determine if the change:

- impacts key internal milestones
- impacts the "Critical Path"
- impacts any external milestones
- results in a cost change to the work package budget

If the change results in impacts to key internal milestones, impacts the critical path, and/or impacts any external milestones, the "what if" schedule shall be routed to each SPPO Work Package Manager who will have three (3) working days to assess the impact of the "what if" to their respective work package(s). Any impacts should be communicated to the originator of the "what if" change and incorporated into the "what if" schedule within the three working day time period. No response from any Work Package Manager within the three days indicates that there is no impact to their work package and tacit approval of the change.

The cost impact of the "what if" will be determined by each affected Work Package Manager. The affected Work Package Manager(s) should make every effort to recommend offsetting funding sources from within

the OU4 MAD for cost changes that require an increase to the MAD latest baseline budget. Reductions to the MAD baseline budget will normally be held in Management Reserve or used as a funding source for other cost changes requiring additional funds.

Processing of Change Proposal

If there is no impacts to other work packages outside one SPPO Manager/Direct Report responsibility, no change to external milestone dates, and no work package budget cost change, the change can be approved below the MA Manager level.

Changes which impact work packages managed by two or more SPPO Managers/Direct Report will be reviewed and dispositioned by the MA Manager.

The MA Manager will review and disposition all changes that impact the MAD latest baseline budget or an external milestone date.

Changes above the MA Manager approval threshold will require appropriate documentation (e.g. Plant BCP forms, PCS generated pricing, etc.) and signatures. The Work Package Manager, with the assistance of the CP&B analyst, will prepare the required documentation package for BCPs above the MA Manager approval threshold.

Change requests for Work Packages not included in the OU4 Solar Ponds MAD will follow requirements of the MAD Manager of the affected Work Package.

Change proposals will not be implemented prior to final approval by the appropriate review board/individual.

Change Proposal Documentation

Documentation is required for all changes to the baseline.

Each SPPO Manager/Direct Report can establish their own change control documentation for changes within MA Manager threshold or below. Copies of documentation for changes approved below the MA Manager level and by the MA Manager are to be provided to the SPPO Configuration Management

Person.

Copies of documentation of dispositioned BCPs above the MA Manager threshold are to be provided to the SPPO Configuration Management Person.

Followup Actions

Upon approval of a change proposal, the following actions will be taken:

1. Implement the change
2. Update the detail schedule
3. Upload the changes in the PCS, if applicable
4. Update the WBS, if applicable
5. Update the Work Package documentation, if applicable
6. Update the MAD documentation, if applicable
7. Provide appropriate documentation to Subproject Baseline Administrator to update the Subproject Baseline, if applicable

APPENDIX 1

GLOSSARY OF TERMS

Activity Data Sheet (ADS). The document describing work scope, regulatory drivers, milestones, and funding estimates for a given Environmental Management (EM) activity. the ADS is the main vehicle used to drive planning and budgeting within EM.

Baseline. The documented scope, schedule, or cost commitment/agreement between DOE/RFFO and the M&O Contractors to accomplish the mission, purpose, goals, and general operational guidelines for the administration of all program and projects on site. The baseline is the established plan against which the status of resources and the progress of workscope can be measured.

Baseline Change Proposal (BCP). The document prepared to provide a complete description of a proposed change to the Baseline. BCPs provide justification for proposed changes and document the disposition of such proposed changes. BCPs should describe all impacts on the current year and life-cycle scope, schedule, and cost.

Change Control. The process that reviews and dispositions alterations to approved Baselines.

Contingency. An amount budgeted to cover costs that may result from incomplete design, unforeseen and unpredictable conditions, or uncertainties. Contingency is meant to cover only the scope of work as it is presently conceived and is not intended to provide for additions to scope or to require reduction of scope.

External Milestone. A scheduled date for deliverables and/or measurable performance due to external (external to the M&O Contractor) entities and agreed upon by both RFFO and the M&O Contractor to be Award Fee applicable. External milestones consist of compliance and regulatory milestones, and milestones which are controlled by HQs and RFFO.

Internal Milestone. Schedule dates utilized by the M&O Contractors for clearer tracking of progress and more detailed measurement performance. These milestones are not tracked, managed or mandated by RFFO.

Major Activity (MA). The MA consists of specified areas of work scope that are accomplished through the common summation of individual work packages (WP). The MA also includes major external milestones and baseline funding. The MA is the RFFO management control point of all work at RFETS.

Major Activity Document (MAD). The documentation which outlines each MA's work scope, milestones, and budget authority.

Management and Operating (M&O). The organization contracted to operate the site and manage the activities through which the RFETS' mission is achieved.

Management Control System (MCS). The integrated system for establishing, reporting, and maintaining management information for a project/program, organization, or complex. The

MCS governs the allocation of funding and scope, and the schedule designated within which a project/program must be completed.

Management Reserve (MR). An optional fund that is established as a portion of the contract's total allocated budget withheld for management control purposes, rather than designated to the accomplishment of a specific work scope. MR is held at the MA level and used at the discretion of the M&O MA Manager.

Milestone. A specific event in a schedule usually representing start or completion of key activities.

Primavera and Primavera Project Planner (P3). Computer software system primarily used for scheduling and project management. The detailed schedules in the SPPO are maintained using the Primavera software.

Priority BCP. A BCP that requires other than routine handling to expedite the change process and initiate the new work scope expeditiously.

Project Control System (PCS). The computer programs that maintain the EG&G Management Control System data base (schedules and budgets) and produce system standard reports.

Project 2 (P2). One of the computer programs used in the EG&G PCS to maintain the MCS data base and produce system standard reports.

RFETS. Rocky Flats Environmental Technology Site.

RFFO. Rocky Flats Field Office.

SPPO Managers/Direct Report. Managers and Direct Reports in the SPPO responsible for the management of Summary Cost Accounts/Work Packages in ADS 1258 and associated Work Packages funded by EM30.

Unfunded Activities. Work scope that needs to be or could be accomplished if funding were available.

Work Authorization Directives/Contract Line Items. A description of the cost, scope, and schedule at the program level of the Work Breakdown Structure (WBS) for which an agreement has been made between the M&O Contractors and RFFO. Work Authorization Directives/Contract Line Items include program (and some subprogram) level work scope, general schedule information, and budgeted funding amounts for each program/project. Changes to Contract Line Items require written approval of the Contracting Officer, RFFO.

Work Package (WP). The M&O management control point at which actual costs and performance are measured. The WP includes detailed scope, schedule, and cost for all individual activities required to support accomplishing the scope of the MAs.

CHANGE CONTROL AND CONFIGURATION MANAGEMENT

CHANGE LEVEL	ORGANIZATIONAL LEVEL	BOARD TITLE	APPLICABILITY	THRESHOLDS
LEVEL 0	HQ DOE	EMERGENCY SYSTEM ACQUISITION ADVISOR BOARD (ESAAB)	MSA & Select MP	Greater than \$50 mil to MSA
LEVEL I	HQ DOE	PROGRAM CHANGE CONTROL BOARD	MAJOR PROJECTS	Any single change that exceeds \$25 million and pertains to Environmental Restoration
LEVEL II	DOE-RFFO	SITE CHANGE CONTROL BOARD (SCCB)	All changes to MA Baseline	Funding change that exceeds 25 percent of the current year MAD budget or \$1 million, whichever is less Any change to a MAD's scope, i.e., any addition or deletion of individual tasks that alter the scope summary and/or scope requirements/drivers of a MAD. Any external milestone change at the MAD level which exceed three months All baseline changes which must be submitted to HQs for approval
LEVEL III	EG&G	M&O CONTRACTOR CHANGE CONTROL BOARD	All changes to MA Baseline	Less than \$1M funding change between MADs. Any external milestone change less than three months.
LEVEL	EG&G ERPO	ER CHANGE CONTROL BOARD	ER Work Packages and MADs	To Be Determined
LEVEL	MAD Manager	OU4 CONFIGURATION MANAGEMENT PROCESS	MAD CAD Work Packages and other Work Packages Managed by Solar Pond Projects Office	Any change that does not alter the MAD scope, external milestone schedule, and/or cost of Major Activity CAD. Changes that impact work packages in two or more SPPO Manager/Direct Report management responsibility.
LEVEL	SPPO MGR/DIRECT REPORT	OU4 SUMMARY COST ACCOUNT LEVEL PROCESS	Work Packages under SPPO Managers/Direct Reports for management	Any change that does not alter the scope, external milestone schedule, and/or cost of work packages within Major Activity CAD or work packages managed by another SPPO Manager/Direct Report.

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